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(71) Applicant (for all designated States except US): **THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES** [US/US]; National Institutes of Health, Office of Technology Transfer, 6011 Executive Boulevard, Suite 325, Rockville, MD 20852-3804 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FLOMERFELT, Francis, A.** [US/US]; 10902 Stillwater Avenue, Kensington, MA 20895-1130 (US). **GRESS, Ronald, E.** [US/US]; 15621 Ancient Oak Drive, Gaithersburg, MD 20878-3560 (US).

(74) Agent: **NOONAN, William, D.**; Klarquist, Sparkman, LLP, One World Trade Center, Suite 1600, 121 S.W. Salmon Street, Portland, OR 97204 (US).

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(54) Title: SPATIAL FOR ALTERING CELL PROLIFERATION

(57) **Abstract:** This disclosure provides methods useful for altering cell proliferation by modifying SPATIAL activity in cells. In some methods, thymocyte numbers in subjects with disease-associated immunodeficiencies are increased by administering an agent that inhibits SPATIAL activity. Also provided are methods useful for increasing thymocyte number in a subject by administering an agent that interferes with an interaction between SPATIAL and Uba3. In other methods, cell growth is inhibited by introducing or expressing a SPATIAL or SPATIAL-related polypeptide or nucleic acid in one or more cell(s), such as neoplastic cell(s). Further provided are methods of identifying agents that modify (for example, inhibit) SPATIAL expression or activity, or which interfere with an interaction between SPATIAL and Uba3 polypeptides, and therefore which are useful in influencing thymocyte number.



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